

REMARKS

The above amendments to the above-captioned application along with the following remarks are being submitted as a full and complete response to the Official Action dated November 16, 2005. In view of the above amendments and the following remarks, the Examiner is respectfully requested to give due consideration to this application, to indicate the allowability of the claims, and to pass this case to issue.

Status of the Claims

Claims 6, 7, 10, and 25 - 26 stand rejected. Claim 26 is canceled herein, without prejudice and subject to the right to prosecute this claim, or the subject matter thereof, in this or a subsequent application. Claims 6, 7, 10, and 25 are now pending. Claims 6, 7, 10, and 25 are amended herein. Reconsideration of the present Application is respectfully requested in light of the Amendments and Remarks made herein.

Rejection Pursuant to Double Patenting

Without acquiescing to Examiner's statements regarding double patenting, and solely to expedite the prosecution of the instant application, Applicants have herein amended claim 10 to include the limitations of first and second metal silicide films of refractory metal. Claim 25 does not include the referenced limitations of claim 10. As such, Applicants respectfully submit that claim 10 is patentably distinct from claim 25, at least based upon the amendments made herein to claim 10.

Rejections Pursuant to 35 U.S.C. 112

Claim 6 stands rejected, pursuant to 35 U.S.C. 112, for lacking proper antecedent basis for the limitation "said first nitride film". Applicants have herein amended claim 6 to include sufficient antecedent basis for the limitation "said first nitride film of refractory metal". Thus, Applicants respectfully submit that the rejections made pursuant to 35 U.S.C. 112 have been obviated by the present amendments.

Rejections Pursuant to 35 U.S.C. 102 and 103

Claims 6 and 7 stand rejected, pursuant to 35 U.S.C. 102, as anticipated by Nakajima et al. (U.S. Patent No. 5,907,188). Claims 6 and 7 also stand rejected, pursuant to 35 U.S.C. 103, as obvious over Nakamura (U.S. Patent No. 6,329,681) in view of Agarwal

(U.S. Patent No. 6,875,679). Applicants respectfully submit that these rejections have been overcome for at least the reasons set forth below.

Applicants' invention, as claimed in the amended claims 6, 7, 10, and 25, necessitates the formation of metal carbide (nitride or oxide) between first and second nitride films of refractory metal, between first and second refractory metal films, and on the boundary between first conductive type and second conductive type silicon layers (See Specification, Figs. 10 and 11).

Nakajima et al. discloses only a diffusion-preventing film, formed of WsixNy 708, between a silicon film 707, 707' and a W film 709. Nakajima's film serves only to prevent interdiffusion, as shown in Nakajima Fig. 30B, col. 31, lines 21-65, and Figs. 31D-31F. At col. 32, lines 51-67 of Nakajima, as pointed out by Examiner, it is taught only that the diffusion-preventing film of WSixNy 708 may contain oxygen and carbon. As such, and as recognized by Examiner, the location and composition of the inter-layer taught by Nakajima are wholly different from the inter-layer claimed in the present invention.

Agarwal discloses only an etch stop layer of SiOx or SiNx 122 formed between a polysilicon layer 108 and a barrier layer 100. This etch stop layer is formed by ion implantation of oxygen or nitrogen (col. 2, lines 64-67, Fig 10), or by ion implantation of carbon (col. 3, lines 1-3). As such, the inter-layer location and composition taught by Agarwal are wholly different from the inter-layer claimed in the present invention.

With regard to Nakamura et al., Applicants agree with Examiner that Nakamura would require very significant modification in order to approach Applicants' claimed invention. These shortcomings of Nakamura are, as discussed above with respect to Agarwal, not overcome by Agarwal or by the combination of Nakamura and Agarwal.

For at least the foregoing reasons, Applicants respectfully traverse the rejections made pursuant to 35 U.S.C. 102 and 103, and requests that those rejections be withdrawn.

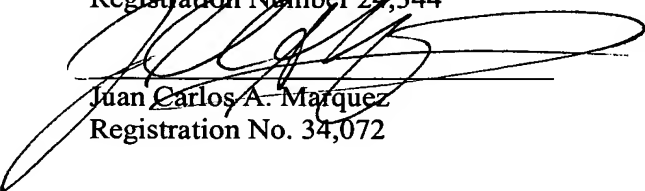
Conclusion

Favorable consideration of this application is respectfully solicited. Should there be any outstanding issues requiring discussion that would further the prosecution and

allowance of the above-captioned application, the Examiner is invited to contact the Applicants' undersigned representative at the address and telephone number indicated below.

Respectfully submitted,

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